

**Results of Radioactive Material Monitoring of Aquatic Organisms (Location G in Lake Hayama)**

<Location G in Lake Hayama: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
G-1	○	○	○	○	○	○
G-2	-	○	-	-	○	-
G-3	○	○	○	-	○	-
G-4	-	○	-	-	○	-
G-5	○	○	○	-	○	-

<Location G in Lake Hayama: Site measurement item>

Locations	Latitude and longitude of the location		Survey date and time			Water					Sediment		Other	
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Secchi disk depth (m)		
G-1(Surface layer)	37.7321°	140.8127°	2016/8/22	11:28	11:03	27.4	23.1	Sand sediment	7.5Y 2/2	Plant pieces	4.0	2.0		
G-1(Bottom layer)						23.4								
G-2	37.7267°	140.8223°		-	10:15	-	6.9	Ooze	7.5Y 3/1	Plant pieces	-	-		
G-3(Surface layer)	37.7302°	140.8307°		09:15	09:25	28.0	22.0	Sand sediment with gravel	7.5Y 2/2	Plant pieces	7.0	2.0		
G-3(Bottom layer)						23.2								
G-4	37.7382°	140.8035°		-	12:50	-	24.1	Sand	7.5Y 4/3	Plant pieces	-	-		
G-5(Surface layer)	37.7341°	140.8088°		11:35	11:45	27.7	24.0	Sand sediment	7.5Y 2/2	Plant pieces	2.8	2.0		
G-5(Bottom layer)						24.2								

<Location G in Lake Hayama: General survey items/Analysis of radioactive materials Water>

Locations	Latitude and longitude of the location		Survey date and time		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electric conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
	Latitude	Longitude	Date	Time (water)												
G-1(Surface layer)	37.7321°	140.8127°	2016/8/22	11:28	7.4	1.1	4.3	9.0	6.8	0.04	2.1	3	2.8	0.0076	0.040	-
G-1(Bottom layer)					7.4	<0.5	3.9	8.8	7.2	0.04	1.8	2	2.2	0.0086	0.041	0.00087
G-3(Surface layer)	37.7302°	140.8307°		09:15	7.5	0.6	4.3	8.7	6.7	0.04	2.0	2	2.1	0.011	0.055	-
G-3(Bottom layer)					7.3	<0.5	5.0	7.9	8.3	0.05	2.6	3	2.9	0.011	0.055	-
G-5(Surface layer)	37.7341°	140.8088°		11:35	7.5	1.2	4.3	8.8	6.9	0.04	2.1	2	2.8	0.0081	0.047	-
G-5(Bottom layer)					7.4	0.8	4.2	8.6	7.1	0.04	1.9	4	3.7	0.016	0.082	-

<Location G in Lake Hayama: General survey items/Analysis of radioactive materials Sediment>

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E <sub>SHLE</sub> (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm <sup>3</sup> )	Grain size distribution								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
	Latitude	Longitude	Date	Time (sediment)							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)	Maximum grain diameter (mm)			
G-1	37.7321°	140.8127°	2016/8/22	11:03	7.1	315	51.9	10.3	17.3	2.722	0.0	0.0	24.5	44.7	18.3	12.5	0.16	2.0	570	3200	3.9
G-2	37.7267°	140.8223°		10:15	6.9	302	75.0	15.8	35.8	2.556	0.0	0.8	1.8	4.6	35.9	56.9	0.0030	2.0	4100	23000	-
G-3	37.7302°	140.8307°		09:25	7.1	179	51.3	8.3	21.0	2.696	6.0	7.9	12.8	13.4	35.1	24.8	0.036	19	640	3600	-
G-4	37.7382°	140.8035°		12:50	7.4	252	22.3	2.0	2.3	2.735	0.5	8.8	69.8	18.1	1.2	1.6	0.41	4.8	180	960	-
G-5	37.7341°	140.8088°		11:45	7.2	295	50.5	7.9	7.8	2.690	3.7	2.6	27.3	31.5	21.7	13.2	0.17	19	410	2300	-

<Location G in Lake Hayama: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific name	English name	Population	Sample weight (kg-wet)	Note			Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
G-1	In the lake	37.7321°	140.8127°	2016/8/22	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.016	-	-	-	6.6	N.D.(1.9)	6.6	-
					Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0070	-	-	-	120	20	100	-
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena									
					Arthropoda	Insecta	Odonata	Cordulegastriidae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops									
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani									
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis									
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Parachauliodes japonicus</i>	Parachauliodes japonicus									
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	117	0.013	Imago	-	-	64	11	53	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	16	0.0059	Immature fish	-	-	15	N.D.(7.5)	15	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	4	0.025	Immature fish	Obscure digesta	Viscera removed	68	10	58	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	3	0.020	Immature fish	Obscure digesta	Viscera removed	40.8	5.8	35	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	1	0.67	Mature fish	Fish	Viscera removed	521	81	440	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius	47	0.015	Immature fish, Mature fish	-	-	28.5	4.5	24	-
					Vertebrata	Osteichthyes	Siluriformes	Bagridae	<i>Pseudobagrus tokiensis</i>	Cut-tailed bullhead	12	0.011	Immature fish	-	-	42.2	7.2	35	-
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.16	-	-	-	285	45	240	-

\*1: Organisms were collected in or around the targeted water areas.

\*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

\*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

\*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

\*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

\*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

\*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

\*8: Activity concentrations include counting errors, but the details are omitted here.